

SEQUENCE LISTING

<110> THUDIUM, Kent
SELBY, Mark

<120> CYTOMEGALOVIRUS INTRON A FRAGMENTS

<130> 2302-16095 / PP16095.002

<140>

<141>

<150> 60/240,502

<151> 2000-10-13

<160> 8

<170> PatentIn Ver. 2.0

<210> 1

<211> 838

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: full length
intron A

<400> 1
gtaagtaccg cctatagact ctataggcac acccctttgg ctcttatgca tgctatactg 60
tttttggtt ggggcctata caccctcgct ccttatgcta taggtgatgg tatagcttag 120
cctataggtg tgggttattg accattattg accactcccc tattggtgac gatactttcc 180
attactaatc cataacatgg ctctttgcca caactatctc tattggctat atgccaatac 240
tctgtccttc agagactgac acggactctg tattttttaca ggatgggggtc ccattttatta 300
tttacaaatt cacatataca acaacgccgt ccccggtgcc cgcagttttt attaaacata 360
gcgtgggatc tccacgcgaa tctcgggtac gtgttccgga catgggctct tctccggtag 420
cggcggagct tccacatccg agccctggtc ccatgcctcc agcggctcat ggtcgctcgg 480
cagctccttg ctctaacag tggaggccag acttaggcac agcacaatgc ccaccaccac 540
cagtgtgccg cacaaggccg tggcggtagg gtatgtgtct gaaaatgagc tcggagattg 600
ggctcgcacc gtgacgcaga tgggaagactt aaggcagcgg cagaagaaga tgcaggcagc 660
tgagttgttg tattctgata agagtcagag gtaactcccg ttgcggtgct gttaacgggtg 720
gagggcagtg tagtctgagc agtactcgtt gctgccgcgc gcgccaccag acataatagc 780
tgacagacta acagactgtt cctttccatg ggtcttttct gcagtcaccg tcgtcgac 838

<210> 2

<211> 100

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligo for substitution of nucleotides 52-740 of
Intron A

<400> 2
 atgcatctcg ttgetgccgc gcgcgccacc agacataatc gctgacacac tgacagactg 60
 ttcctttcct tttttttttt ttgcagtcac cgctgctcgac 100

<210> 3
 <211> 145
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Deletion
 mutant pCON3 Intron

<400> 3
 gtaagtaccg cctatagact ctataggcac acccctttgg ctcttatgca tctcgttgct 60
 gccgcgcgcg ccaccagaca taatcgctga cacactgaca gactgttcct ttcctttttt 120
 tttttttgca gtcaccgctg tcgac 145

<210> 4
 <211> 2170
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: major
 immediate-early gene of hCMV

<400> 4
 ctgcagtga taataaaatg tgtgtttgtc cgaaatacgc gttttgagat ttctgtcgcc 60
 gactaaattc atgtcgcgcg atagtgggtt ttatcgccga tagagatggc gatattggaa 120
 aaatcgatat ttgaaaatat ggcattattga aaatgtcgcc gatgtgagtt tctgtgtaac 180
 tgatatcgcc atttttccaa aagtgttttt tgggcatacg cgatatctgg cgatacggct 240
 tatatcgttt acgggggatg gcgatagacg actttggcga cttgggcat tctgtgtgtc 300
 gcaaatatcg cagtttcgat ataggtgaca gacgatatga ggctatatcg ccgatagagg 360
 cgacatcaag ctggcacatg gccaatgcac atcgatctat acattgaatc aatattggca 420
 attagccata ttagtcattg gttatatagc ataaatcaat attggctatt ggccattgca 480
 tacgttgtat ctatatcata atagtacat ttatattggc tcatgtccaa tatgaccgcc 540
 atgttgacat tgattattga ctagttatta atagtaatca attacggggg cattagttca 600
 tagcccatat atggagttcc gcgttacata acttacggta aatggccccg ctcgtgaccg 660
 cccaacgacc ccgccccatt gacgtcaata atgacgtatg ttcccatagt aacgccaata 720
 gggactttcc attgacgtca atgggtggag tatttacggg aaactgcccc cttggcagta 780
 catcaagtgt atcatatgcc aagtcgggcc ccctattgac gtcaatgacg gtaaatggcc 840
 cgcctggcat tatgcccagt acatgacctt acgggacttt cctacttggc agtacacca 900
 cgtattagtc atcgtatta ccattggtgat gcggttttgg cagtacacca atgggcgtgg 960
 atagcggttt gactcacggg gatttccaag tctccacccc attgacgtca atgggagttt 1020
 gttttggcac caaaatcaac gggactttcc aaaatgtcgt aataaccccg ccccgttgac 1080
 gcaaattggg ggtaggcggtg tacgggtggga ggtctatata agcagagctc gtttagtgaa 1140
 ccgtcagatc gcctggagac gccatccacg ctgttttgac ctccatagaa gacaccggga 1200
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 ttccattact aatccataac atggctcttt gccacaacta tctctattgg ctatatgcca 1500
 atactctgtc cttcagagac tgacacggac tctgtatttt tacaggatgg ggtcccattt 1560

attattttaca	aattcacata	tacaacaacg	cgcgtcccccg	tgcccgcagt	ttttattaaa	1620
catagcgtgg	gatctccacg	cgaatctcgg	gtacgtgttc	cggacatggg	ctcttctccg	1680
gtagcggcgg	agcttccaca	tccgagccct	gggtcccattg	ctccagcggc	tcattggtcgc	1740
tcggcagctc	ccttgctccta	acagtggagg	ccagacttag	gcacagcaca	atgcccacca	1800
ccaccagtgt	gccgcacaag	gccgtggcgg	tagggatatgt	gtctgaaaat	gagctcggag	1860
attggggctcg	caccgtgacg	cagatggaag	acttaaggca	gcggcagaag	aagatgcagg	1920
cagctgagtt	gttggtattct	gataagagtc	agaggtaact	cccgttgccg	tgctgttaac	1980
gggtggagggc	agtgtagtct	gagcagtact	cgttgctgcc	gcgcgcgccca	ccagacataa	2040
tagctgacag	actaacagac	tgttcccttc	catgggtctt	ttctgcagtc	accgtccttg	2100
acacgatgga	gtcctctgcc	aagagaaaga	tggaccctga	taatcctgac	gagggccctt	2160
cctccaaggt						2170

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<220>
<223> Description of Artificial Sequence:  wild type
      rabbit beta-globin
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```
<210> 6
<211> 127
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> Description of Artificial Sequence:  optimized
      rabbit beta-globin
```

```
<400> 6
gtaagtatcc tttttacagc acaacttaat gagacagata gaaactggtc ttgtagaaac 60
agagtagtcg cctgcttttc tgccagggtac taacttctct cccctctcct cttttctttt 120
tctgcag                                     127
```

```
<210> 7
<211> 19
<212> DNA
<213> Artificial Sequence
```

<220>
<223> Description of Artificial Sequence: primer
KBT-162

<400> 7
cgctgttttg acctccata

$$\begin{array}{ll} \langle 210 \rangle & 8 \\ \langle 211 \rangle & 20 \end{array}$$

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer
KBT-163

<400> 8
gttgagcaat tcacgttcac

20

0997066-10101
T02T0T " 9902660